

## **ABSTRACT**

A method and an apparatus for measuring coefficient of restitution of an impact are disclosed. The apparatus includes a launching device, an enclosure, a second initially stationary object, and a plurality of speed sensors. The launching device causes a first object to be moved toward the second object and to impact the second object within the enclosure. The sensors are positioned within the enclosure to determine the velocity of the first object before impact, the velocity of the second object after impact and optionally the velocity of the first object after impact. Using these velocities, the coefficient of restitution of the impact can be determined. By using an enclosure and a second object that is initially stationary and is moved upon impact, the coefficient of restitution of the first object can be determined. The apparatus closely simulates a real-world golf ball/golf club collision. The first object may simulate a golf ball or a golf ball core assembly and the second object may simulate a golf club, and *vice versa*.

The apparatus may also continually and automatically return the second object to its initial, pre-impact position, and the apparatus may be used to determine the durability of golf balls by repeatedly impacting golf balls against the second object.